

## Claims

1. Method for determining the phase position of a camshaft of an internal combustion engine with a crankshaft (21), a camshaft (36) and a setting mechanism (37) by means of which  
5 the phase position (PH) of the camshaft (21) can be adjusted in relation to the crankshaft (37),  
characterized in that
- the phase position (PH) is determined in accordance with a detected crankshaft angle (CRK) and a recorded camshaft  
10 angle (CRM),
  - a filter coefficient (FF3) of a filter is determined in accordance with the amplitude (AMP) of an oscillation of the phase position (PH) and the modification (DELTA) of said phase position (PH) and
  - 15 - a filtered phase position (PH\_FIL) of the determined phase position (PH) is determined by using the filter.
2. Method according to claim 1,  
characterized in that  
filtering takes place by means of a non-recursive filter of the  
20 first order.
3. Method according to claim 1,  
characterized in that  
the modification (DELTA) of the phase position (PH) is filtered  
and the filter coefficient (FF3) is determined in accordance  
25 with the filtered modification (DELTA\_FIL) of said phase position (PH).
4. Method according to claim 3,  
characterized in that  
the modification (DELTA) of the phase position (PH) is filtered  
30 in accordance with the rotation (N) and/or an oil temperature (TOIL).

5. Method according to one of the previous claims,  
characterized in that  
the amplitude (AMP) of the oscillation of the phase position  
(PH) is filtered and the filter coefficient (FF3) is determined  
5 in accordance with the filtered amplitude (AMP\_FIL) of the  
oscillation of the phase position (PH).

6. Method according to claim 5,  
characterized in that  
the amplitude (AMP) is filtered in accordance with the rotation  
10 (N) and/or the oil temperature (TOIL).

7. Method according to one of the previous claims,  
characterized in that  
the reducing of the filter coefficient (FF3) within a  
predetermined moment in time or within a predetermined  
15 crankshaft angle section is limited to a predetermined  
threshold value (SW).

8. Method according to one of the previous claims,  
characterized in that  
filtering is undertaken by means of a non-recursive filter of  
20 the first order.

9. Device for determining the phase position of a camshaft of  
an internal combustion engine with a crankshaft shaft (21), a  
camshaft (36) and a setting mechanism (37) by means of which  
the phase position (PH) of the camshaft (36) can be adjusted in  
25 relation to the crankshaft (21),  
characterized in that

- first means are provided which determine the phase position  
(PH) in accordance with a detected crankshaft angle (CRK)  
and a recorded camshaft angle (CAM),
- 30 - second means are provided which determine a filter  
coefficient (FF3) of a filter in accordance with the

amplitude (AMP) of an oscillation of the phase position (PH) and the modification (DELTA) of said phase position (PH), and

- third means are provided which determine a filtered phase position (PH\_FIL) of the determined phase position (PH) by using the filter.